

(FILE 'HOME' ENTERED AT 10:50:11 ON 15 OCT 2003)

FILE 'CAPLUS, USPATFULL' ENTERED AT 10:50:28 ON 15 OCT 2003

L1        4028 S THERMAL? (P) BROMIN?  
L2        2701 S L1 AND BROMINE  
L3        647 S L2 AND ?BENZYL?  
L4        443 S L3 AND ?TOLUENE  
L5        219 S L4 AND BROMIDE  
L6        180 S L5 AND AROMATIC  
L7        41 S L5 AND HYDROGEN BROMIDE  
L8        23 S L7 AND BROMINATION  
L9        13 S L8 AND HEAT  
L10      13 DUP REM L9 (0 DUPLICATES REMOVED)  
L11      46 S THERMAL BROMINATION  
L12      21 S L11 AND BROMINE  
L13      20 S L12 NOT L10  
L14      5 S L13 AND ?BENZYL?  
L15      15 S L13 NOT L14  
L16      20 DUP REM L13 (0 DUPLICATES REMOVED)  
L17      15 DUP REM L15 (0 DUPLICATES REMOVED)

L14 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN  
AN 2003:435359 CAPLUS  
DN 139:6671  
TI Process for chemoselective thermal **benzylic** bromination  
IN Mortensen, Max K.; Elnagar, Hassan Y.; Roy, Ranjit K.; Herndon, Robert C.;  
Allen, Robert H.; Caillet, David A.  
PA USA  
SO U.S. Pat. Appl. Publ., 7 pp.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003105350	A1	20030605	US 2001-10404	20011205
	WO 2003055833	A1	20030710	WO 2002-US39291	20021205

W: CA, JP  
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT,  
LU, MC, NL, PT, SE, SI, SK, TR

PRAI US 2001-10404 A 20011205  
OS CASREACT 139:6671  
AB A thermal **benzylic** bromination process for producing a **benzyl** bromide comprises: (A) contacting gaseous **bromine** with a reaction mixt. having an org., liq. phase initially comprising an (un)substituted arom. ring-contg. compd. bearing one **benzylic** carbon atom (e.g., p-bromotoluene), the total amt. of **bromine** used relative to the arom. compd. being 0.2-1.2 mol of **bromine** per mol of arom. compd.; (B) thoroughly dispersing the gaseous **bromine** into the liq. phase, such that localized **bromine** accumulation is suppressed; and (C) maintaining the temp. of the liq. phase at 100-170.degree. so as to be sufficient to effect **benzylic** bromination of said the **benzylic** Me group (e.g., producing p-bromobenzyl bromide and p-bromobenzal bromide).

L14 ANSWER 3 OF 5 USPATFULL on STN  
AN 2000:106109 USPATFULL  
TI **Benzyllic** halogenation of alkylbenzoic acid esters  
IN Elnagar, Hassan Y., Baton Rouge, LA, United States  
PA Albemarle Corporation, Richmond, VA, United States (U.S. corporation)  
PI US 6103926 20000815  
AI US 1999-266879 19990312 (9)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Killos, Paul J.  
LREP Spielman, Jr., E. E.  
CLMN Number of Claims: 30  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 793

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Direct preparation of **benzyllically** halogenated alkylbenzoic acid ester from an alkylbenzoic acid ester in which the alkyl group is a primary or secondary alkyl group is carried out. The ester group of the starting ester (i) is devoid of non-aromatic unsaturation and (ii) if an aromatic group, is devoid of ring substitution that would undergo **benzyllic** halogenation. The process comprises slowly feeding halogen continuously and/or intermittently to an agitated solution of the alkylbenzoic acid ester in a liquid halogen-containing solvent maintained at a thermal halogenation temperature such that when the alkyl group of the alkylbenzoic acid ester is a primary alkyl group and monohalogenation is desired, the total amount of halogen fed does not exceed about 0.8 mole of halogen per mole of alkylbenzoic acid ester. If the alkylbenzoic acid ester is a toluic acid ester and dihalogenation is desired, the amount of halogen fed is over 1 mole but no more than about 1.8 moles per mole of the toluic acid ester. Ester cleavage is minimized and other advantages are made possible.

L14 ANSWER 5 OF 5 USPATFULL on STN

AN 82:19080 USPATFULL

TI Thermal process for preparing 3-phenoxybenzyl bromide

IN Keblys, Kestutis A., Southfield, MI, United States

PA Ethyl Corporation, Richmond, VA, United States (U.S. corporation)

PI US 4326089 19820420

AI US 1977-836428 19770926 (5)

DT Utility

FS Granted

EXNAM Primary Examiner: Helfin, Bernard

LREP Johnson, Donald L., Odenweller, Joseph D., Hunt, John F.

CLMN Number of Claims: 3

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 251

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Reaction of 3-phenoxytoluene with bromine at elevated temperature yields 3-phenoxybenzyl bromide, 3-phenoxybenzal bromide, or a mixture thereof. In contrast to teachings of the prior art, phosphorus halide catalysis or u.v. activation is not required to achieve a desirable amount of side-chain bromination with a minimum of nuclear halogenation. For example, it was observed that at 265.+-.5.degree. C., good yields of the desired benzyl and benzal bromide were obtained, but no nuclear halogenated by-product was detected by gas chromatography.

L17 ANSWER 9 OF 15 USPATFULL on STN

AN 82:55570 USPATFULL

TI Process for preparing bromine- and fluorine-containing halogenated hydrocarbons

IN Bohm, Horst, Hanover, Germany, Federal Republic of Rudolph, Werner, Hanover, Germany, Federal Republic of Massonne, Joachim, Hanover, Germany, Federal Republic of

PA Kali-Chemie AG, Hanover, Germany, Federal Republic of (non-U.S. corporation)

PI US 4359371 19821116

AI US 1980-211922 19801201 (6)

RLI Continuation of Ser. No. US 1977-810564, filed on 27 Jun 1977, now abandoned

PRAI DE 1976-2629775 19760702

DT Utility

FS Granted

EXNAM Primary Examiner: Demers, Arthur P.

LREP Schwartz, Jeffery, Schwaab, Mack, Blumenthal & Koch

CLMN Number of Claims: 10

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 428

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for brominating fluorine-containing halogenated hydrocarbons is disclosed which comprises the step of reacting at least one halogenated fluorohydrocarbon compound of formula (I) ##STR1## wherein R.<sub>1</sub> represents hydrogen, fluorine, chlorine, bromine or a lower alkyl group which is perhalogenated by a halogen selected from the group consisting of fluorine, chlorine and bromine;

R.<sub>2</sub> represents hydrogen, fluorine, chlorine, or bromine, and;

R.<sub>3</sub> represents fluorine or perfluorinated lower alkyl, in gaseous form with bromine under irradiation with light having a wavelength from about 250 nm to about 600 nm in the presence of an active amount of chlorine not exceeding about 2 moles per mole of bromine at a reaction temperature not exceeding 300 degree C., which is sufficient for transforming the reactants into sufficiently stable gaseous compounds and for substituting the hydrogen in a compound of formula (I) by bromine to form a compound of formula (II) ##STR2## wherein R.<sub>1</sub>, R.<sub>2</sub> and R.<sub>3</sub> are as defined above.

L17 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS on STN  
AN 1954:42330 CAPLUS

DN 48:42330  
OREF 48:7563b-e

TI Bromination of hydrocarbons. VI. Photochemical and **thermal bromination** of toluene. Bond dissociation energies

AU Anderson, Herbert R., Jr.; Scheraga, Harold A.; VanArtsdal, Ervin R.

CS Cornell Univ., Ithaca, NY

SO Journal of Chemical Physics (1953), 21, 1258-67  
CODEN: JCPSA6; ISSN: 0021-9606

DT Journal

LA Unavailable

AB cf. C.A. 36, 6849.6; 46, 2410b; 48, 5618a. Infrared analyses showed that the reaction between PhMe and Br is predominantly a side-chain substitution, the products being PhCH<sub>2</sub>Br and HBr. In the temp. range 82-132.degree. the photochem. reaction was strongly inhibited by HBr. The thermal reaction was studied in the absence of added HBr at 166.degree.. Except for the step involving the dissocn. of Br mols., both the photochem. and thermal mechanisms involved the same type of atom and radical chain as found in the bromination of simple alkanes. The corrected activation energy of the over-all reaction, as detd. from the temp. coeff. of the photochem. reaction, was 7.2 kcal./mole. This value was assigned to the rate-detg. step Br + RH : R + HBr. From the temp. dependence of the HBr inhibition, the activation energy for the reverse of this step was assigned the value 5.0 kcal./mole, which permits the C-H bond dissocn. energy in the alkyl side chain of PhMe to be estd. at 89.5 kcal./mole at room temp. The discrepancy between this and Szwarc's (C.A. 42, 2825i) value of 77.5 kcal./mole from pyrolysis studies is discussed. The efficiency of PhMe as a 3rd body in the homogeneous recombination of Br atoms, and also problems relating to steric effects in atom and radical reactions, are discussed. A description is given of a high-temp., high-vacuum, corrosion-resistant valve for use with Br and HBr.